

Rex Derr  
Director



STATE OF WASHINGTON  
**WASHINGTON STATE PARKS AND RECREATION COMMISSION**

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[www.parks.wa.gov](http://www.parks.wa.gov)

MEMORANDUM

November 30, 2010

TO: Jim Justin, Legislative Director  
Office of the Governor

Barbara Baker, Chief Clerk  
House of Representatives

Thomas Hoemann, Secretary of the Senate  
Washington State Senate

FROM: Rex Derr, Director 

RE: Legislative Report: Small Scale Prospecting and Mining on Ocean Beaches

Per the proviso in Substitute Senate Bill 6343, Sec. 1(6), I am submitting a report jointly authored by the Department of Fish and Wildlife and the State Parks and Recreation Commission staffs entitled, "2008-2010 Small Scale Mining and Prospecting on Ocean Beaches (SSB 6343) Pilot Program Report".

*SSB 6343, Sec.1(6): The state parks and recreation commission and the department of fish and wildlife shall report their findings and recommendations on the potential impacts and the activity of small scale prospecting and mining on ocean beaches to the appropriate committees of the legislature by December 1, 2010.*

If you have questions, please call Brian Hovis, Director of Governmental Affairs at (360) 902-8504. Thank you for your consideration.

cc: John Mankowski, Governor's Executive Policy Advisor  
Phil Anderson, Director, Department of Fish and Wildlife  
Commissioner Fred Olson, Chair

Enclosures



# **2008 – 2010 Small Scale Mining and Prospecting on Ocean Beaches (SSB 6343) Pilot Program Report**

**December 2010**

**Washington Department of Fish and Wildlife  
Washington State Parks and Recreation Commission**



**Summary:** Substitute Senate Bill 6343 required Washington State Parks and Recreation Commission (Parks) and Washington Department of Fish and Wildlife (WDFW) to conduct a two-year pilot program to allow small scale mining and prospecting on ocean beaches. The bill further required WDFW to report potential environmental impacts, user conflicts, and recommendations to the Washington State Parks and Recreation Commission by October 1, 2010 and both agencies to jointly report to the Legislature by December 1, 2010.

WDFW staff issued 81 new and modified Hydraulic Project Approvals (HPAs) to 62 individual applicants during the project. In lieu of a permit from Parks, miners were requested to voluntarily report on the location of each mining activity, the number of people participating, number of days per activity, quantity of material removed from the beach, type of equipment used, and any difficulties encountered. WDFW staff attended numerous prospecting/mining events to answer questions about the pilot program and provide information on how to complete the application for an HPA. To collect information on the pilot program, WDFW staff attended two group outings, conducted 12 individual HPA compliance checks, responded to information requests and conducted a phone survey. Park rangers made contacts with participants on the beach, including 12 additional compliance checks.

Based on information voluntarily provided to Parks, participants removed small amounts of sand/ore, ranging from one tablespoon to five gallons. Response from the 33 applicants interviewed during the phone survey indicated that beach mining trip frequency varied among participants. Interviewed participants had a total of 90 outings to the four pilot program areas. Of the four pilot areas, the Iron Springs area was preferred by a vast majority of participants because of the access to freshwater and location (proximity to other activities). Participants surveyed came from a wide geographic area including 12 Washington and two Oregon counties. Pilot program participants rated their satisfaction high (average rating of 4 out of possible 5). All surveyed applicants would participate in small scale mining and prospecting on ocean beaches in the future, given the opportunity. Because WDFW only considered participants' impact on fish life, no data on impacts to birds or other wildlife was collected or considered.

If the program is allowed to continue and expand, impacts to wildlife should be considered. During the course of the pilot program only minor violations occurred and no impacts to fish life were observed. If beach placer mining is allowed in the future and on a larger spatial scale, impacts to bird, wildlife, and migrating adult salmonid species must be more thoroughly considered during the SEPA review. Because little is known about where and when forage fish spawn on the Washington coast, spawning inspections should be conducted prior to including an area in any future beach prospecting. Concerns and negative impacts to fish life and habitat should be minimized by setting timing and geographic restrictions similar to other projects regulated by the HPA process. From a recreation perspective, Parks found that the beach mining activities, as permitted under the pilot program, did not appear to conflict with other user groups. Parks staff is open to continuing to allow the activity. However, the legislature would need to make a permanent change to RCW 79A.05.165 or the Parks Commission would need to specifically allow the activity by rule.

## Introduction

After requests from the prospecting community, the Senate passed Substitute Senate Bill (SSB) 6343 during the 2008 session. The bill required Washington State Parks and Recreation Commission (Parks) and Washington Department of Fish and Wildlife (WDFW) to conduct a pilot program to allow small scale mining and prospecting on ocean beaches and monitor potential environmental impacts and user conflicts. The pilot program was to run from July 1, 2008 through July 1, 2010 and include at least three appropriate areas within the Seashore Conservation Area. The initial areas selected by Parks and WDFW were spread out geographically throughout the 65 mile Seashore Conservation Area and included Long Beach, South Beach, and North Beach (Figure 1). In addition to requiring at least three appropriate prospecting areas, SSB 6343 directed WDFW to issue individual Hydraulic Project Approvals (HPAs; see Addendum A), monitor the compliance of small scale mining activities, and report its findings and recommendations to the Washington State Parks and Recreation Commission by October 1, 2010. The agencies were required to jointly report their findings and recommendations to the Legislature by December 1, 2010.







Figure 1. Three original pilot program beach mining areas. Locations in red indicated north and south boundaries.

Initially only motorized pans, non-motorized pans, sluice boxes, mini rocker boxes and non-motorized concentrators were allowed under the pilot program. In December 2008, after reviewing requests by prospectors to allow additional equipment types and an additional area with freshwater access, Parks and WDFW added internal combustion equipment such as suction dredges and motorized concentrators to the allowed equipment list. A fourth prospecting area (Figure 2) was added near Iron Springs Resort that met the prospectors' need for a reliable, year round source of freshwater (Boone Creek).



**Figure 2. Iron Springs pilot area located north of Ocean Shores, off State Route 109.**

## Methods

In order to protect fish life and monitor potential environmental impacts and user conflicts, WDFW issued individual HPAs to mineral prospecting clubs, families, and individuals. Permit provisions were broken into two classes; informative and protective. Informative provisions provide applicants with valuable pilot program information such as program timing, locations, notification

requirements, authorized equipment, and definitions. Provisions meant to protect fish and shellfish resources included pump intake screening requirements and notification to relocate the jobsite if razor clams or other shellfish were encountered.

In lieu of a permit from Parks, miners were requested to voluntarily report on their activities. Information gathered included location of each mining activity, the number of people participating, number of days per activity, quantity of material removed from the beach, type of equipment used, and any difficulties encountered.

WDFW staff attended numerous prospecting/mining events to answer questions about the pilot program and provide information on how to complete the Joint Aquatic Resource Project Application (JARPA) to apply for an HPA. Staff was invited to the Gold Prospector's Association of America (GPAA) club outing at the North Beach area on September 13, 2008 to answer questions about the pilot program and to observe mining techniques and potential impacts. On February 21, 2009, staff gave a presentation explaining the JARPA/HPA application process and the pilot program to prospectors at the Gold, Gem and Mineral Show in Monroe, Washington. The GPAA had a second club outing at the newly added Iron Springs pilot area on February 28, 2009. The local Area Habitat Biologist spent the day observing internal combustion equipment use and answering questions from prospectors and the general public. Park rangers also made numerous educational contacts with prospectors on the beach, as well as concerned neighbors in the North Beach area.

After the pilot program ended a non-probability based phone survey was conducted in August of 2010 (Addendum B). The Area Habitat Biologist attempted to contact all 62 individuals that received an HPA to ask six closed-ended questions about the pilot program. The survey questions dealt with number of outings, locations selected, and the reason the area was selected.

Two attempts were made to contact each applicant from the phone numbers provided on the JARPA application.

## **Results**

WDFW staff issued a total of 81 HPAs to 62 individual applicants during the time period of this project. The 81 HPAs issued included modifications to permits issued early in the pilot program to add boundary clarification, additional equipment and a fourth location. No pilot program HPAs were appealed or rejected.

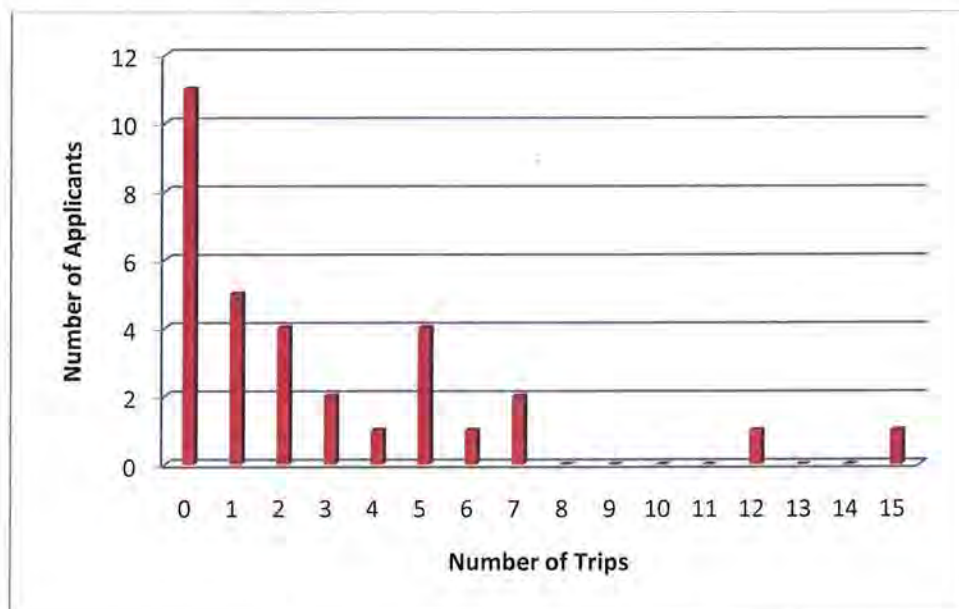
Potential environmental impacts were monitored during two GPAA group outings and 12 HPA compliance checks conducted by the local Area Habitat Biologist. Park rangers also checked in regularly with participants, conducting 12 formal compliance checks over a 16 month period. The results of these compliance checks indicate that prospectors committed only minor violations during the course of the pilot program. Minor violations observed included not notifying the Area Habitat Biologist before beginning prospecting, not having a copy of the HPA on the jobsite, and working near, but outside of the pilot study area. All these minor violations were quickly and politely corrected.

A review of phone logs, fax and email records indicated that 21 applicants followed the provision in the HPA to notify WDFW before starting beach mining operations. Parks received notification from 25 individuals or groups who spent a total of 82 days mining on the beach. Without knowing the total number of individual beach mining trips, it is impossible to determine what percent of applicants followed the notification provision. During the phone interview, some applicants stated they were confused by the requirement to notify both WDFW and Parks.



Based on information voluntarily provided to Parks, the vast majority of the activity took place in the Iron Springs pilot area. Participants used a variety of equipment, including high bankers, pans, sluice boxes, and suction dredges. Not all participants provided information on the quantity of sand/ore they removed, but reported quantities were very small, ranging from one tablespoon to five gallons.

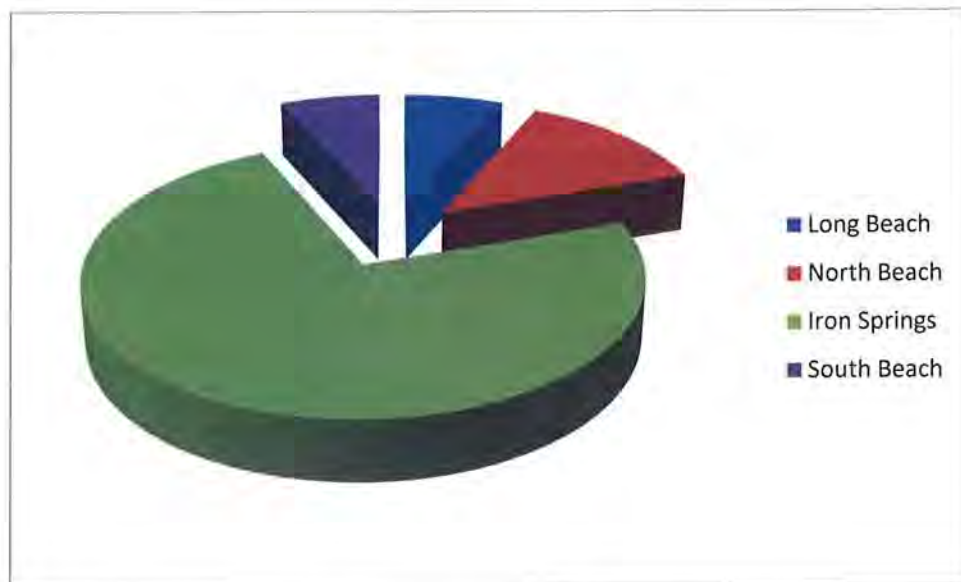
During the phone survey, 33 applicants were interviewed, 5 were wrong or disconnected phone numbers, and 24 were unavailable. Of the contacted applicants, none refused to participate in the survey. In addition to the six interview questions, the applicants were asked if they had any addition comments about the pilot program.



**Figure 3. Number of trips to all pilot program areas by HPA applicants.**

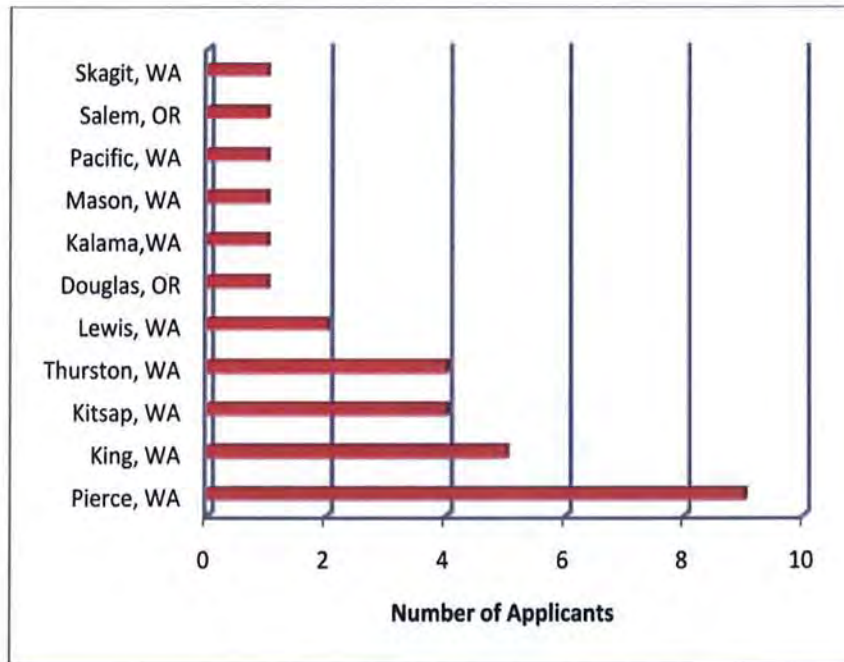
Of the 33 respondents, the number of outings ranged from 0 to 15, with an average of 3 (Figure 3). Eleven individuals did not prospect in any of the pilot areas because they were too busy (5), were unhappy with, or did not understand the regulations (3), had health

issues (2), or did not want to drive that far (1). Of the four pilot areas, 71% of those polled selected the Iron Springs area, followed by North Beach (10%), Long Beach (8%), and South Beach (7%) (Figure 4). The top two reasons prospectors selected a particular area was access to freshwater and location (proximity to other activities).



**Figure 4. Pilot program area preference by interviewed HPA applicants.**

Participants surveyed came from a wide geographic area (Figure 5). Prospectors resided in 12 Washington and two Oregon Counties. Pilot program satisfaction from applicants was high. Interviewees were asked to rate their overall opinion of the pilot program on a scale of 1 to 5, 1 being terrible and 5 being terrific. The average satisfaction rating was 4, with 40% giving the pilot program a 5 (Figure 6). All surveyed applicants would participate in small scale mining and prospecting on ocean beaches in the future, given the opportunity.



**Figure 5. County of residence of pilot program participants.**



**Figure 6. Satisfaction rating on a scale of 1 (terrible) to 5 (terrific) of participants interviewed.**

The WDFW Area Habitat Biologist received numerous phone calls and in-person questions about the pilot program. The questions came from two main user groups; sportsmen (anglers and shellfish harvesters), and the general public that were not used to seeing the type of equipment or activities allowed under the pilot program on the beach. Once the Area Habitat Biologist explained why the prospectors were on the beach and what regulations were in place, most were satisfied.

## **Discussion**

During the State Environmental Policy Act (SEPA) review and subsequent permitting process, numerous potential environmental impacts and user conflicts resulting from activities conducted under the pilot program were considered. Natural resource agencies were concerned about impacts to critical fish and wildlife habitat from the removal of quantities of sand, noise, and physical alteration of habitat. WDFW attempted to protect fish and shellfish life through the selection of protective provisions in the HPA.

WDFW's primary biological concern fell into two categories; impacts to bird populations (Wildlife Program) and potential impacts to fish habitat and the protection of fish life (Habitat Program). Because the HPA only pertains to the protection of fish life, no data on impacts to birds or other wildlife was collected or considered. If the program is allowed to continue and expand, impacts to wildlife should be considered.

Observation made during club outings and HPA compliance checks indicate that the holes on the beach created during the prospecting process caused no more impact than the holes created by recreational shellfish harvesters gathering razor clams. The Area Habitat Biologist witnessed many large holes (up to twenty square feet) filled in by waves faster than the prospectors could fill in the holes. The prospectors also came up with a way to minimize the possibility of oil and gas



spills by placing equipment in rubber totes with absorbent material inside. No oil spills or sheens were witnessed in or near active prospecting areas. The worst environmental impact observed was the removal of driftwood and woody material for camp fires or yard decorations. Provision 12 of the HPA clearly stated that large woody material or woody debris jams shall not be undermined, cut, disturbed, or moved. Failure to follow this provision might be due to participants not understanding the definition of large woody material and that non-pilot program participants could remove woody material from the beach. Once the Area Habitat Biologist explained the importance of woody material to beach stabilization, erosion and habitat, pilot program participants seemed to understand the provision better.

If beach placer mining is allowed in the future and on a larger spatial scale, several biological concerns need to be addressed. Because HPAs only regulates work that “uses, obstructs, diverts or changes the natural flow or bed of state water for the protection of fish life”, impacts to bird and wildlife species and habitats must be more thoroughly considered during the SEPA review. Additional human activities and equipment noise may deter sensitive bird and wildlife species from breeding or feeding.

The protection of migratory adult salmonids should also be considered during the SEPA process because currently there are only protective prohibited timing restrictions available in the HPA for juvenile salmonids. Provision 16 of the pilot program HPA allows prospectors to partially divert up to 50% of the wetted perimeter of a body of water into mineral prospecting equipment. Diversion and partial blockage of stream channels has the potential to alter migratory behavior and stress fish. These impacts should be able to be minimized or avoided by the permit process.

Another potential impact to fish life to consider is the disturbance of sensitive forage fish spawning habitat. Both surf smelt and Pacific Sand Lance spawn in high intertidal zones that are likely to be disturbed by prospecting activities. Unfortunately, little is known about where and when

forage fish spawn on the Washington Coast. Because of these concerns, forage fish spawning inspections should be conducted prior to including an area in any future beach prospecting. Concerns and negative impacts to fish life and habitat should be able to be minimized by setting timing and geographic restrictions similar to other projects regulated by the HPA process.

During the pilot program, the Area Habitat Biologist learned that not all areas on the Washington Coast are as productive for beach mining as others. Areas with active accretion of black sand and high wave actions are preferred by the miners. Additionally, numerous prospectors commented on the need for a year round freshwater source to operate equipment. Salt water is hard on equipment and requires freshwater rinsing to prevent corrosion and damage to expensive equipment.

From a recreation perspective, Parks found that the beach mining activities, as permitted under the pilot program, did not appear to conflict with other user groups. Participants were generally easy to work with and in compliance with the conditions of the HPA. A few residents in the North Beach area had voiced some initial trepidation about the activity, but their concerns seemed to wane as the pilot project progressed. Overall, holes on the beach created by prospectors appeared to cause no more recreational impact than holes created by razor clam harvesters.

Based on results of the pilot, Parks staff is open to continuing to allow the activity. However, a statute or rule change would be needed. Under RCW 79A.05.165, "Every person is guilty of a misdemeanor who: ...Cuts, breaks, injures, destroys, takes, or removes any tree, shrub, timber, plant, or natural object in any park or parkway except..in accordance with such rules as the commission may prescribe..." SSB 6343 set up a short-term exemption to this statute for the beach mining pilot project. However, this exemption expires on December 1, 2010. In order to continue to allow the activity, the legislature would need to make a permanent statutory change or the Commission would need to allow the activity by rule.

# **Addendum A: Individual HPA**



Washington  
Department of  
FISH and  
WILDLIFE

## HYDRAULIC PROJECT APPROVAL

RCW 77.55.021 - See appeal process at end of HPA

Coastal  
48 Devonshire Road  
Montesano, WA 98563  
(360) 249-4628

Issue Date:  
Project Expiration Date:

Control Number: 115477-1  
FPA/Public Notice #: N/A

<u>PERMITTEE</u>	<u>AUTHORIZED AGENT OR CONTRACTOR</u>
HPA Template 123 Main St Anytown, WA 98502	

Project Name: Small Scale Beach Mineral Prospecting and Mining  
Project Description: Two-year pilot program under SSB 6343 to allow small scale mineral prospecting and mining on four areas of ocean beach.

### PROVISIONS

1. **TIMING LIMITATIONS:** This project may begin immediately and shall be completed by July 1, 2010. Under this pilot program, beach placer mining is allowed year-round.

2. **PROJECT LOCATIONS:** You may conduct mineral prospecting and mining only between the line of ordinary high tide and the line of extreme low tide on the following four ocean beach areas:  
Iron Springs Pilot Area - 1/2 mile stretch of beach centered on the mouth of Boone Creek. The north and south boundaries of this pilot area may be marked by yellow markers placed 1/4 mile north and 1/4 mile south of the mouth of Boone Creek.

North Beach Pilot Area - from Ocean City ocean beach access at 2nd Avenue southward to Oyhut ocean beach access at Damon Road.

South Beach Pilot Area - from Bonge Avenue ocean beach access at West Bonge Avenue southward to Grayland ocean beach access at Grayland Beach Road.

Long Beach Pilot Area - from Ocean Park ocean beach access at Bay Avenue southward to Klipsan Beach ocean beach access at 225th Street.

3. **NOTIFICATION REQUIREMENT:** You shall notify Area Habitat Biologist Bill Rehe in writing at 48 Devonshire Road, Montesano, WA 98563, by FAX at (360) 664-0689, or by telephone at (360) 249-1224 at least one business day before starting work, and again as soon as possible after finishing work to arrange for a compliance inspection. Notification shall include the permittee's name, project location, starting date or end date of work, and the control number of this Hydraulic Project Approval (HPA).

4. **NOTIFICATION REQUIREMENT:** You shall notify Washington State Parks by telephone or in person at least one business day before starting work, and again when leaving the beach. For the Long Beach pilot area, call Cape Disappointment State Park at (360) 642-3078; for the South Beach pilot area, call Twin Harbors State Park at (360) 268-9717; and for the North Beach and Iron Springs pilot areas, call Ocean City State Park at (360) 289-3553. Notification shall include the permittee's name, project location, starting date or end date of work, and the control number of this HPA.





## HYDRAULIC PROJECT APPROVAL

RCW 77.55.021 - See appeal process at end of HPA

Coastal  
48 Devonshire Road  
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Issue Date:

Control Number:

115477-1

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5. Work shall be accomplished under your Joint Aquatic Resources Permit Application (JARPA), except as modified by this HPA. Copies of your JARPA and HPA shall be on site during work.

6. You may use only hand-held mineral prospecting tools and the following mineral prospecting equipment:

- a) Pans;
- b) Spiral wheels;
- c) Sluices, concentrators, rocker boxes, and high-bankers with riffle areas totaling 10 square feet or less, including ganged equipment;
- d) Suction dredges that have suction intake nozzles with inside diameters that should be 5 inches or less, but shall be no greater than 5-1/4 inches to account for manufacturing tolerances and possible deformation of the nozzle. The inside diameter of the dredge hose attached to the nozzle may be no greater than one inch larger than the suction intake nozzle size;
- e) Power sluice/suction dredge combinations that have riffle areas totaling 10 square feet or less, including ganged equipment, suction intake nozzles with inside diameters that should be 5 inches or less, but shall be no greater than 5-1/4 inches to account for manufacturing tolerances and possible deformation of the nozzle, and pump intake hoses with inside diameters of 4 inches or less. The inside diameter of the dredge hose attached to the suction intake nozzle may be no greater than one inch larger than the suction intake nozzle size; and,
- f) High-bankers and power sluices that have riffle areas totaling 10 square feet or less, including ganged equipment, and pump intake hoses with inside diameters of 4 inches or less.

7. The widest point of a sluice, including attachments, shall not exceed 25% of the wetted perimeter at the point of placement.

8. You may not use vehicle-mounted winches. You may use one motorized winch and one hand operated winch to move boulders and large woody material that is not embedded, and additional cables, chains, or ropes to stabilize them.

9. Under RCW 77.57.010 and 77.57.070, any device you use for pumping water from fish-bearing waters must be equipped with a fish guard to prevent passage of fish into the pump intake. You must screen the pump intake with material that has openings no larger than 5/64 inch for square openings, measured side to side, or 3/32 inch diameter for round openings, and the screen must have at least one square inch of functional screen area for every gallon per minute (gpm) of water drawn through it. For example, a 100 gpm rated pump would require at least a 100 square inch screen.

10. All equipment fueling and servicing must be done so that petroleum products do not get into the body of water. If a petroleum sheen or spill is observed, you must contact the Washington Military Department Emergency Management Division at 1-800-258-5990 and Area Habitat Biologist Bill Rehe at (360) 249-1224. You must immediately stop your activities, remove your equipment from the body of water and beach, and correct the source of the petroleum leak. You may not return your equipment to the water or beach until the problem is corrected. You must store fuel and lubricants away from the water inside a vehicle or landward of the beach, and in the shade when possible.





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FPA/Public Notice #: N/A

11. You may work within the wetted perimeter only from one-half hour before official sunrise to one-half hour after official sunset. If your mineral prospecting equipment exceeds one-half the width of the wetted perimeter of the stream, you must remove the equipment from the wetted perimeter or move it so that a minimum of 50% of the wetted perimeter is free of equipment between one-half hour after official sunset to one-half hour prior to official sunrise.

12. You may not undermine, cut, disturb, or move large woody material or woody debris jams.

13. You may not undermine, cut, or disturb live, rooted woody vegetation of any kind.

14. Only one excavation site per individual is permitted. However, you may use a second excavation site as a settling pond. Multiple individuals may work within a single excavation site.

15. You must backfill all trenches, depressions, or holes created in the beach during project activities before working another excavation site (except during use as a settling pond) or leaving the excavation site.

16. You may partially divert a body of water into mineral prospecting equipment. However, at no time may the diversion structure be greater than 50% of the width of the wetted perimeter, including the width of the equipment. You may not divert the body of water outside of the wetted perimeter.

17. You may use materials only from within the wetted perimeter, or artificial materials from outside the wetted perimeter, to construct the diversion structure by hand. You must remove artificial materials used in the construction of a diversion structure and restore the site to its approximate original condition prior to abandoning the site.

18. You may use pressurized water only to operate the mineral prospecting equipment authorized by this HPA and to redistribute dredge tailings.

19. You may not disturb live razor clams or other shellfish within the bed. If you observe or encounter live razor clams or other shellfish during excavation, you must relocate your operations.

20. If at any time, as a result of project activities, you observe a fish kill or fish life in distress, you must immediately cease operations and notify Washington Military Department Emergency Management Division (1-800-258-5990) and Area Habitat Biologist Bill Rehe at (360-249-1224) of the problem. You may not resume work until WDFW gives approval.

21. The following definitions apply when operating under this HPA:

Aggregate - A mixture of minerals separable by mechanical or physical means.

Artificial material - Clean, inert material that you use to construct diversion structures for mineral prospecting.

Concentrator - A device used to physically or mechanically separate the valuable mineral content from aggregate.

Excavation site - The pit, furrow, or hole from which you remove aggregate to process and





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recover minerals or into which wastewater is discharged to settle out sediments.

Ganged equipment - Two or more pieces of mineral prospecting equipment coupled together to increase efficiency. An example is adding a second sluice to a high-banker.

Hand-held mineral prospecting tools - Tools that you hold by hand and are not powered by internal combustion, hydraulics, or pneumatics. Examples include metal detectors, shovels, picks, trowels, hammers, pry bars, hand-operated winches, and battery-operated pumps specific to prospecting; and vac-pacs.

High banker - A stationary concentrator that you can operate outside the body of water from which the water is removed, using water supplied by hand or by pumping. A high-banker consists of a sluice box, hopper, and water supply. You supply aggregate to the high-banker by means other than suction dredging. This definition excludes rocker boxes.

Large woody material - Trees or tree parts larger than four inches in diameter and longer than six feet, and rootwads, wholly or partially waterward of ordinary high tide line.

Mineral prospecting equipment - Any natural or manufactured device, implement, or animal (other than the human body) that you use in any aspect of prospecting for or recovering minerals.

Pan - An open metal or plastic dish that you operate by hand to separate gold or other minerals from aggregate by washing the aggregate.

Power sluice - High-banker

Power sluice/suction dredge combination - A machine that can be used as a power sluice, or with minor modifications, as a suction dredge.

Prospect(ing) - The exploration for minerals and mineral deposits.

Riffle - The bottom of a concentrator containing a series of interstices or grooves to catch and retain a mineral such as gold.

Rocker box - A nonmotorized concentrator consisting of a hopper attached to a cradle and a sluice box that you operate with a rocking motion.

Sluice - A trough equipped with riffles across its bottom which you use to recover gold and other minerals with the use of flowing water.

Spiral wheel - A hand-operated or battery-powered rotating pan that you use to recover gold and minerals with the use of water.

Suction dredge - A machine that you use to move submerged aggregate via hydraulic suction. You process the aggregate through an attached sluice box for the recovery of gold and other minerals.

Wetted perimeter - the areas of a watercourse covered with flowing or nonflowing water.

### PROJECT LOCATIONS

#### Location #1 Iron Springs Pilot Area

WORK START: January 23, 2009				WORK END: July 01, 2010		
WRIA: 21.9000		Waterbody: Wria 21 Marine			Tributary to:	
1/4 SEC: SW 1/4	Section: 04	Township: 19 N	Range: 12 W	Latitude: N 47.1624	Longitude: W 124.1935	County: Grays Harbor
Location #1 Driving Directions						
Iron Springs Pilot Area extends from 1/4 mile north of Boone Creek to 1/4 mile south of Boone Creek.						

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### Location #2 North Beach Pilot Area

WORK START: January 23, 2009				WORK END: July 01, 2010		
WRIA: 21.9000		Waterbody: Wria 21 Marine			Tributary to:	
1/4 SEC: SW 1/4	Section: 27	Township: 18 N	Range: 12 W	Latitude: N 47.0705	Longitude: W 124.1761	County: Grays Harbor
Location #2 Driving Directions North Beach Pilot Area extends from Ocean City ocean beach access at 2nd Avenue southward to Oyhut ocean beach access at Damon Road.						

### Location #3 South Beach Pilot Area

WORK START: January 23, 2009				WORK END: July 01, 2010		
WRIA: 22.9000		Waterbody: Wria 22 Marine			Tributary to:	
1/4 SEC: NE 1/4	Section: 25	Township: 16 N	Range: 12 W	Latitude: N 46.8492	Longitude: W 124.1122	County: Grays Harbor
Location #3 Driving Directions South Beach Pilot Area extends from Bonge Avenue ocean beach access at West Bonge Avenue southward to Grayland ocean beach access at Grayland Beach Road.						

### Location #4 Long Beach Pilot Area

WORK START: January 23, 2009				WORK END: July 01, 2010		
WRIA: 24.9000		Waterbody: Wria 24 Marine			Tributary to:	
1/4 SEC: SE 1/4	Section: 29	Township: 12 N	Range: 11 W	Latitude: N 46.4915	Longitude: W 124.0577	County: Pacific
Location #4 Driving Directions Long Beach Pilot Area extends from Ocean Park ocean beach access at Bay Avenue southward to Klipsan Beach ocean beach access at 225th Street.						

### APPLY TO ALL HYDRAULIC PROJECT APPROVALS

This Hydraulic Project Approval pertains only to those requirements of the Washington State Hydraulic Code, specifically Chapter 77.55 RCW (formerly RCW 77.20). Additional authorization from other public agencies may be necessary for this project. The person(s) to whom this Hydraulic Project Approval is issued is responsible for applying for and obtaining any additional authorization from other public agencies (local, state and/or federal) that may be necessary for this project.